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ABSTRACT

This study examined the influence of schools and teachers on students' attitudes and academic achievement, focusing on teacher characteristics in relation to student achievement. It also looked at three home environment factors (socioeconomic status, educational environment, and home climate) to see if students' family lives were an important influence on their success at school. A total of 700 high school students from 25 classrooms within five schools in Cyprus completed three surveys: the Classroom Culture Description Questionnaire, the Home Environment Description Questionnaire, and the Self-Concept and Aspirations Questionnaire. Data analysis indicated that students' attitudes toward their teachers, educational environments, and home environments varied significantly. Teachers' expectations of the students made a significant difference in students' academic achievement, self-concept, and aspirations. Teachers who were task-oriented were evaluated less favorably by students and produced lower levels of academic achievement. When students perceived their schools as effective, their achievement was higher. Socioeconomic status strongly affected students' academic achievement. (Contains 11 references.) (SM)

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Teaching and production in the classroom: The case in Cyprus lyceums.

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The complicated nature of classroom culture and the role of the teacher to manage the classroom in such way so to enhance student learning need continuous consideration from educators (Blair, 1988). Which characteristics or which combination of teaching characteristics can create a positive classroom climate that is conducive to learning? Obviously, there is no universal recipe that can be useful for every classroom. Therefore, the researcher should try to find which combination of classroom management and teaching characteristics lead to student achievement in specific cultures and even within each classroom. Teaching remains the main factor that determines the milieu of the classroom (Good and Brophy, 2000). What is happening in the classroom during a specific course is directly connected to the behavior of the teacher. Behavior in terms of teaching methodology, the management of the human relations in the classroom, the focus and the objectives of the subject, the expectations, the students' feelings and all human interactions in the classroom.

In an effort to study teaching we focus on three basic characteristics of teaching practices: human-oriented teaching style, task-oriented teaching style, and teacher expectations. Hargreaves (1995) suggested that there are two distinct classroom cultures: the task-oriented (instrumental function) and the relationship-oriented (expressive function) cultures. Here I tried to transfer that cultural distinction in to the characteristics of teaching style. For this study human-oriented style describes a teaching style where the teacher is caring, encouraging, supportive and is trying to satisfy the social and learning needs of all students. Research studies showed that students are more cooperative in the classroom if the teacher is friendly, helpful and manages the classroom in a democratic way (Blackledge & Hunt, 1995). Task-oriented style describes a teacher that focuses on production. The teacher makes sure that there is a serious and orderly classroom atmosphere focusing on student learning. Teacher expectations measure the degree that the students understand that a teacher expects them to be successful in the classroom. Teacher expectations are very well documented in the literature and educators today know how to value their effect on students' performance. Also various direct and indirect cues have been discussed as means for disclosing teacher expectations to the students (Good & Brophy, 2000). This study can help educators discover other ways that teacher expectations are communicated to the students, especially in distinct cultures. When the teacher is able to communicate high expectations this can increase students' motivation for learning (Gage & Berliner, 1992). I add teacher expectations into Hargreaves' model because I believe that in any style, teacher expectations are a basic component in order to complete the mission of the classroom. I have to note here that none of the factors are mutually exclusive. Rather the teacher can perform high – or low – in all aspects of teaching style and simultaneously hold high expectations.

Next to the classroom practices always stands the home as an inseparable partner. Several studies showed that home plays a major influence on students' success at school (Koutsoulis & Campbell, 2001). Iverson and Walberg (1982) distinguish home between the sociopsychological environment and the socioeconomic status. They concluded that academic ability and achievement were more closely linked to the measures of the sociopsychological environment and intellectual stimulation in the home than they are to parental socioeconomic status such as occupation and amount of education.

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Each culture has distinct characteristics. The same is true for the classroom. Each classroom has its unique synthesis due to the individuality of the students and the effect of the teacher's teaching style. It is very important for teachers to know how students understand teachers and school's effectiveness and how teaching style influences their school success. What is important for students' school success? Does home remain the major factor? Does school and teachers really make substantial difference even though the home is not supportive? And if they do make the difference which teaching styles are more important?

Objectives

The "hidden objective" of the study is to examine again the historic question of teaching: "Can school and teachers make the difference?" We are going to examine teaching characteristics in relation to production in the classroom. Specifically, we are going to examine three measures of the home to see if the home background of the students remains the basic controller of students' success at school. We examine home environment referring to socioeconomic status (SES), home educational environment and home climate. Finally we examine all factors in a linear regression model on how they predict students' production.

Methods and Data Source

The study was conducted in Cyprus with self-administered questionnaires. For the purpose of this study, a stratified random selection of 25 classrooms of 700 students within five high schools was made. Almost all students that participated in the study attended their last year in high school during 1999-2000 school year. For the purposes of this presentation to AERA at Seattle 2001 I analyze only 306 questionnaires. Specifically I analyze 12 groups of students.

For the selection of the data three instruments were used: The *Classroom Culture Description Questionnaire (CCDQ)* was designed to study classroom culture as a general aspect and also the classroom climate during math. The following is one of the types of questions included in this instrument: "During math serious academic work is taking place". We also collected the self-reported math grade for the first third of the current academic year 1999-2000, and their math test results along with five (5) demographic characteristics. Students also evaluated the effectiveness of the math teacher and the school. Also the *Home Environment Description Questionnaire (HEDQ)* was designed to study the *home educational environment* and the *home climate* situation in the home using nine items. Home educational environment studies if home is supportive towards the student's effort at school. Home climate measures how peaceful the home environment is, concerning human relations. Finally, the *Self-Concept and Aspirations Questionnaire (SCAQ)* was designed to measure *math self-concept* and the *educational aspirations* of the students.

Statistical Analyses

The first step for the data analysis was factor analysis in order to simplify them. Within CCDQ three sub-scales were detected to measure teacher characteristics: human-oriented style, task-oriented style, and teacher expectations. Within HEDQ factor analysis isolated one major factor that is called home educational environment. In order to create the factor Socioeconomic Status we compare the mean of parents' education, occupation and perceived financial situation of the family. Table 1 presents the demographic characteristics of the factors. Within the SCAQ a major factor was created that is classroom production which includes math self-concept, aspirations and math achievement. I believe that these three measures give us a production scale beyond the traditional achievement measures, as student the feels strong for him/herself; he/she is ambitious and also does well on achievement, the student has a specific mission and works towards this mission.

Table 1. The items, the mean, the standard deviation and the alpha reliability of the factors.

FACTORS	ITEMS	MEAN	STANDARD DEVIATION	Alpha RELIABILITY
Socioeconomic status	5	60.01	15.18	.768
Home educational environment	10	73.11	19.01	.843
Home climate	1	75.40	27.51	-
School effectiveness	2	46.60	19.98	-
Teacher effectiveness	1	69.3	26.70	-
Human-oriented teaching style	12	71.61	17.91	.936
Task-oriented teaching style	6	67.72	18.15	.848
Teacher expectations	4	67.43	19.48	.824
Production	7	65.46	18.89	.791

Results

After the isolation of the factors with the initial analyses we run the compare means analysis in order to study the existing culture in each group and check for possible differences. Also we run the cross tabulation to check the composition of those groups referring to gender and setting of residential area.

Table 2. Compare means. Group variable: Classroom

	The home			Perceived school effectiveness		The classroom			
Classroom	Socioeconomic status of the family	Home educational environment	Home climate	School effectiveness	Teacher effectiveness	Human-oriented teaching style	Task-oriented teaching style	Teacher expectations	Production
1. 3rd grade Business, Lemesos	[illegible]	[illegible]	80.5	[illegible]	82.2	81.94	63.85	71.21	[illegible]
2. 3rd grade Business, Larnaka	[illegible]	79.14	84.1	53.60	83.8	86.29	76.67	77.82	[illegible]
3. 3rd grade Economics, Larnaka	[illegible]	70.18	72.2	[illegible]					[illegible]
4. 3rd grade Economics, Lemesos	58.12	76.36	73.5	56.92	92.5	84.80	85.22	70.83	[illegible]
5. 3rd grade Economics, Lemesos	[illegible]	76.25	[illegible]	[illegible]					[illegible]
6. 2nd grade Economics, Lefkosia	62.56	72.72	75.0	48.62	84.8	81.09	81.07	72.60	[illegible]
7. 3rd grade Classical studies, Larnaka	[illegible]	[illegible]	[illegible]	47.53	[illegible]	[illegible]	[illegible]	[illegible]	64.92
8. 3rd grade Classical studies, Lefkosia	66.06	77.07	71.7	42.15	79.6	80.08	64.78	67.17	72.75
9. 3rd grade Science, Lefkosia	69.86	75.19	81.3	46.71	79.6	73.26	82.27	72.27	75.17
10. 2nd grade Science, Lefkosia	70.30	71.52	79.1	53.64	[illegible]	67.02	80.45	67.86	78.57
11. 3rd grade Science, Larnaka	65.02	73.96	77.8	57.65	[illegible]	[illegible]	[illegible]	68.70	80.40
12. 3rd grade Science, Lemesos	70.85	71.70	74.1	[illegible]	[illegible]	75.27	68.49	72.86	83.77
Total	60.01	73.11	75.4	46.60	69.3	71.61	67.72	67.43	65.46

*Dark→Below average, *White → On average, *Light → Above average

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Table 3. Cross-tabulation: Setting of residential area by classroom

	Classroom												
Setting	1	[illegible]	3	4	5	6	[illegible]	8	9	10	11	12	Total
Urban	18 78.3%	[illegible]	21 67.7%	21 100%	20 90.9%	21 84.0%	[illegible]	20 87.0%	18 75.0%	20 90.9%	21 77.8%	23 100%	227 75.2%
Rural	5 21.7%	[illegible]	10 32.3%		2 9.1%	4 16.0%	[illegible]	3 13.0%	6 25.0%	2 9.1%	6 22.2%		75 24.8%
Total	23 100%	[illegible]	31 100%	21 100%	22 100%	25 100%	[illegible]	23 100%	24 100%	22 100%	27 100%	23 100%	302 100%

*Dark→ Rural dominated classrooms, *White → Groups close to population proportions,
*Light → Urban dominated classrooms

Table 4. Cross-tabulation: Gender by classroom

	Classroom											
Gender	[illegible]	2	3	4	5	6	[illegible]	9	10	11	12	Total
Males	[illegible]	11 37.9%	14 43.8%	10 47.6%	12 52.2%	10 40.0%	[illegible]	12 50.0%	14 63.3%	15 55.6%	14 60.9%	127 41.8%
Females	[illegible]	18 62.1%	18 56.3%	11 52.4%	11 47.8%	15 60.0%	[illegible]	12 50.0%	8 36.4	12 44.4%	9 39.1%	177 58.2%
Total	[illegible]	29 100%	32 100%	21 100%	23 100%	25 100%	[illegible]	24 100%	22 100%	27 100%	23 100%	304 100%

*Dark→ Female dominated classrooms, *White → Groups close to population proportions,
*Light → Male dominated classrooms

The first group I want to point out is group 12 "the elite" of the sample with the highest score in production. As we see, this "elite group" is in the science specialization, it has mostly boys and all of the students are from the urban areas. The interesting finding with this group is that they perceive teaching in their classroom just above average, and they evaluate their math teacher below average. They also perceive school effectiveness below average. Amazingly, they describe their home educational environment and home climate below average. The only measure that gives them the "right" to be the elite is their SES. They were born with this heritage and they know that they are the leaders in school even though they believe that their school doesn't offer them the best education. For them, success in life is taken for granted. They don't believe that school is able to help them succeed, they possibly extent their education to private afternoon tutoring. Arrogant behavior? "What ever happens at school, we know our destination..."

At the other end of the spectrum is group 1 with the lowest measures of production. This group has almost 80% female students and average proportion of urban and rural students. Those students describe their educational home environment as the worst of all the other groups. They describe school effectiveness as the lowest but they describe their math teacher as very effective and his/her human-oriented teaching style as very good. Here we have a "negative" home environment with a good teacher straggling to make the difference without success. The factor that seems again to be the decisive one for school success is their SES. They are helpless within the educational system and it seems that nobody can help them overcome their destiny...

In group 2 – a rural-dominated group – one of the best teachers (according to the students) with very positive measures on teaching is not able to pull the group to better production. Even though those students believe that

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they have the best teacher, they get positive human-oriented teaching style, they describe their educational home environment and climate as very positive, they are still one of the worst group in production. Simply because they were born with almost the lowest SES measure. The teacher cannot make the difference. School again provides no hope to them even though they seem ambitious and promising.

A very interesting case is group 7. They believe that they have a "bad" teacher, a "bad" home (low SES and not supportive environment) but they score on average on production. It is a rural and female dominated classroom. Even though their nemesis plighted them to be weak, they are on average. What seems to save them is possibly the classroom culture, which helped them to create stronger – than what were expected – self-concept, aspirations and higher score on achievement measures. What makes the difference for them? They don't believe that it is the teacher or the school. They are working hard against their destiny. But for those students we might be able to say that school did make a difference. It is possible that due to the fact that they are almost all female students, teachers accept them more easily as they are more conforming.

Group 11 is also interesting. Their SES is not from the elite and their position on the map shouldn't be there according to their SES. They believe that their teacher and his/her methodology is not effective. They describe their home on average. They believe though, that their school is very effective. It seems again that for their success at school – as we define it here – responsible is neither their home educational environment nor their teacher. They secure success due to their SES and maybe due to external factors, like private tutoring.

Regression Analysis

In this section we are trying to study the factors that predict production. Here, the analysis is based on individual responses and not on groups.

Table 5. Regression Analysis coefficients. Dependent variable: Production, R^2= .44

	Beta	T-value	Significance
(Constant)		4.202	.000
Socioeconomic status	.350	7.295	.000
Home educational environment	-.087	-1.469	.143
Home climate	-.007	-0.129	.897
School effectiveness	.144	2.967	.003
Teacher effectiveness	-.145	-2.052	.041
Human-oriented teaching style	-.137	-1.588	.113
Task-oriented teaching style	-.130	-2.026	.044
Teacher expectations	.688	11.743	.000

Referring to the historic question, it seems that the answer is positive (?). From the school factors teacher expectations seem to make the difference on students' production. When students understand that the teacher believes in them they produce more, in achievement, self-concept and aspirations. The analysis supports the

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findings of several researchers that believe that teacher expectations can play a major role in shaping students' success at school. Teacher's expectations are communicated to students by several cues (Good & Brophy, 2000), but the most important means is through teaching methodology. It is important for the teacher to persuade students – practically – that he/she has high expectations from the students, showing enthusiasm and trying to help students to think creatively (Burden, 2000).

From the teaching style factors task-oriented teaching style has a small negative prediction score. This is rather a surprising finding. A teacher that focuses on task is producing less! In Cyprus the majority of the students in order to pass the introductory examinations for the state Universities, attend private tutoring after schools. It is possible that the work is done there and not within the school unit. Therefore, the teacher that tries to present the lesson in a way that focuses on task – maybe ignoring the human factor – is evaluated by the students less favorably. Studying school and teacher effectiveness we see that school effectiveness significantly predicts production. It seems that when students perceive their school as effective they produce more. It is possible that school is seen as a whole for students, taking into account the teachers and its reputation. Another surprising finding is the negative score of teacher effectiveness. Again the explanation stands on the teaching factors outside the school. High achieving students (like those in the science specialization) seem to be less satisfied because in private tutoring they get a "better" lesson as there the groups are small and the students that attend have specific aspirations. Therefore, the students evaluate the teacher in the mass education less favorably than the teacher in the private tutoring.

Of course, the second stronger factor is the family's socioeconomic status, which seems to follow the students' faith in their long journey in school. SES is shown from the results that is a decisive factor in shaping students' production. The finding that home educational environment is not important for students' production, doesn't support the finding by Iverson and Walberg (1982). This might be due to the changes that happen in the society where home educational environment is improved today as more and more people are educated, but differences on SES remain. A society that is looking towards its future is unable to help students overcome their destiny. Unfortunately, our research like hundred of research studies in the past showed that SES determines the students' development at school: A school system that is unable to work towards students' success at school and leaves the home to do everything. It is possible that for the existing political system, a "non-existed school" is more preferable because this way SES plays even more important role. This way the society reproduces itself without disruptions. Coleman et al. (1966) "prove" that this is unavoidable. It can be true that the public educational system is not willing to help every individual to flourish. Our society needs to be reproduced. The point is if the society really wants to refuse to any young man that goes through the school system to dream…

Conclusions

We might be able to conclude that the teacher and the school cannot make the difference. But it seems that there is room for hope. There is room for the teacher to help students overcome their destiny. By communicating high expectations and making students believe in themselves. Within an educational system where success is just the entrance to the university, sacrificing all other aspects of learning and access to information, creativity, initiative and democratic ethos – to name few – students are only called to follow a

subject matter-oriented education trying to remember the knowledge to recall it on tests. It is possible that if the school system is useless then the teacher is helpless. Making the difference for a teacher that is just a government employee, with life guarantee for his employment, without vision (International Institute for Educational Design, 1997) is a distant dream. The teacher needs to know the purpose of his/her work and needs to take decisions for that (Johnson & Holdaway, 1990). It seems that getting into the modern society people hoped that SES would have less influence on school success. The human society – especially the European – getting through Middle Ages and the dominance of the nobles dreamed to bring equality of educational opportunities so this way they would provide society with more improvements. It might be true that in our days "the nobles of the economic cast" in each society manage to reduce the opportunities for the people of low SES groups.

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